

Extra Course Syllabus

January 12, 2023

Instructor:

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Demos: Kevin Zembower, KC3KZ, EMAIL: kevin@zembower.org

Text: "The Extra Class License Manual" by ARRL—**Twelfth Edition!** Available at:

- Amazon - https://www.amazon.com/Extra-Class-License-Manual-Spiral/dp/1625951310/ref=sr_1_3?crid=LHWIHAZH3M7&dchild=1&keywords=amateur+extra+class+license+manual+2020-2024&qid=1610476125&srefix=Amateur+E%2Caps%2C168&sr=8-3
- ARRL - <https://home.arrl.org/action/Store/Product-Details/productId/120286>
- Ham Radio Outlet - <https://www.hamradio.com/detail.cfm?pid=H0-017225>
- Amazon has a \$19.99 Kindle edition at https://www.amazon.com/ARRL-Extra-Class-License-Manual-ebook/dp/B089ZXCDCW/ref=sr_1_7?dchild=1&keywords=amateur+extra+class+license+manual&qid=1610477032&sr=8-7 There are lots of illustrations and we jump around the book quite a bit to refer to the questions in the back of the book, so this might be inconvenient depending on your reading device and skills with it.

Class Website: Sessions are recorded and may be found at bit.ly/extraclass2023

Homework: The reading assignments for each week are to be done before class. You may want to skim the material during this first reading, then read carefully following the class session. Following this second reading, answer the questions for the chapter using <http://arrlexamreview.appspot.com/>. Use the Glossary at the back of the book as necessary.

Checkout: <http://www.arrl.org/extra-class-license-manual> for supporting information to the Extra Class License Manual—including a "Study Guide" version of the question pool in the order questions are found in the text. In the last few weeks of the course, you should start taking practice exams which are available at: <https://www.qrz.com/hamtest/>, <https://www.aa9pw.com/amateur-radio-exam-practice/>, <http://www.eham.net/exams/>, and <http://arrlexamreview.appspot.com/>

Class Activities: Classes run on Thursdays from 6:30 to 9:30 PM. If possible, please email if you are going to miss class.

Typical Class Routine

6:30 – 6:45	Review
7:00 – 8:00	New Material
8:00 – 8:10	Break
8:10 – 8:30	Demonstrations
8:30 – 9:30	New Material
9:30 – 10:00	Question and Answer Review

- Jan 12 - Introduction to Course, Organization of Text, Operating Practices**
Chapter 2 – Operating Practices
- Jan 19 - Rules and Regulations and Radio Mathematics**
Chapter 3 – Rules and Regulations
Chapter 4 – Section 4.1 Radio Mathematics
- Jan 26 - Electrical Principles**
Chapter 4 – Section 4.2 Electrical and Magnetic Fields, 4.3 Principles of Circuits
- Feb 2 - Components and Building Blocks**
Chapter 5 – Components and Building Blocks
- Feb 9 - Radio Circuits and Systems – Part 1**
Chapter 6 – Electronic Circuits – Sections 6.1 and 6.2
- Feb 16 - Radio Circuits and Systems – Part 2**
Chapter 6 – Electronic Circuits – Sections 6.3, 6.4 and 6.5
- Feb 23 - Radio Measurements and Performance**
Chapter 7 – Signals and Measurements
- Mar 2 - Modulation, Protocols, and Modes**
Chapter 8 – Radio Modes and Equipment
- Mar 09 - Antennas and Feedlines**
Chapter 9 – Antennas and Feedlines
- Mar 16 - Topics in Radio Propagation**
Chapter 10 – Radio Propagation
- Mar 23 - Safety**
Chapter 11 – Safety

In the central Maryland area, the Laurel VEC in Baltimore is still doing in-person testing once a month. Sign up early, as slots have been filling quickly. See: <https://n3wke.com/subdomains/veteam/>. The Laurel Amateur Radio Club Volunteer Examiner Coordinator (VEC) exams are free, while other VEC's charge from \$10 to \$15.

To search for local exams, go to: <http://www.arrl.org/find-an-amateur-radio-license-exam-session>

Exams are readily available on-line. <https://hamstudy.org/sessions/remote> provides a list of upcoming on-line exam sessions held by various Volunteer Examiner Coordinators (VECs). For details on what is needed and how to proceed, see: <https://blog.hamstudy.org/2020/06/so-you-want-to-take-a-remote-exam/>. You can sign up with any team that has available slots, no matter the location. Note the various time zones so that you pick a time compatible with your schedule.